taxonomic and locomotor groups, 6 populations of humans encompassing geographic and activity pattern variation, and fossil specimens AL-288-1, OH 62, and KNM-WT 15000. Interspecific comparisons show that species with either elongated fore- or hindlimbs can be distinguished from generalized quadrupeds in predictable ways. Humans show greater humero-femoral indices than generalized quadrupeds and *Pan* and *Pongo* show lower indices. KNM-WT 15000 clusters within the lower end of observed human variation, likely due to body size. AL-288-1 and OH 62 cluster with *Pan* suggesting increased use of arboreal substrates compared to KNM-WT 15000 and the human samples. Human groups can be differentiated, although the behavioral correlates of these differences remain unclear.

Human nose shape variation can be explained, in part, by local adaptation to temperature

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The shape of the nose, like other regions of the face, varies both within and across human populations. Whether this variation is primarily due to selection is unclear. Functional studies of the inner nasal cavity suggest that the nasal passage is useful in conditioning inspired air, helping to prevent damage to the mucosal lining of the lungs. We have tested the hypothesis that nose shape differences across human populations are climate-related adaptations. We quantified the three dimensional shape of the nose in 415 individuals of West African, Northern European, East Asian, and South Asian ancestry and show, using a quantitative genetic framework, that the differentiation in the shape of the nares and the size of the nostrils is greater than that expected under genetic drift only. Partial Mantel tests show that nostril size is correlated with projected temperatures for the Last Glacial Maximum (Mantel's r: 0.062, P-value = 0.002) after correcting for sex, age, BMI, and spatial autocorrelation. We confirm that this is a signal of adaptation and not due to phenotypic plasticity. We also find nostril size to be highly heritable in a sample of 1,731 unrelated Europeans (h^2 = 0.41, S.E = 0.18). Together, these results suggest that climate has likely played an important role in the evolution of nose shape. However, the nose is sexually dimorphic in all populations, suggesting that sexual selection be considered in models of nose shape evolution.

Subsistence and mobility at Morton Shell Mound (16IB3): Analysis of femoral cross-sectional properties

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This study relies on bone functional adaptation to test subsistence-related behavior of a Coles Creek fisher-hunter-gatherer group from Morton Shell Mound on the Louisiana coast (male n=8; female n=9). Femoral cross-sections obtained through CTs were processed with Avizo and ImageJ (MomentMacro). Using non-parametric methods, Morton cross-sectional properties were compared to those of fisher-hunter-gatherer groups from Plash Island (1BA134), a Middle Woodland site located in the Coastal Lowlands of Alabama (male n=4; female n=3), and Gold Mine (16RI13), a Troyville site located in northern Louisiana (male n=4; female n=6). Given the similar subsistence strategies and coastal environments at Morton and Plash as well as the relatively more terrestrial environment at Gold Mine, this study predicted the following: Morton terrestrial logistic mobility (TLM), or daily distance traveled on land, reflected through femoral midshaft shape, would not differ significantly from Plash TLM but would be significantly less than inland Gold Mine TLM. While no significant differences exist among the samples in terms of midshaft shape, Morton and Plash exhibit lower levels of sexual dimorphism of midshaft shape, suggesting lower TLM compared to Gold Mine. Additionally, Morton exhibits significantly less midshaft percent cortical area than Gold Mine (males: p=0.023; females: p=0.042), associated with an expanded subperiosteum, which may reflect a mechanical compensation for metabolic-influenced bone mass loss. By assessing cross-sectional properties at Morton Shell Mound through comparison of inland and coastal prehistoric fisher-hunter-gatherers, this study contributes to an understanding of bone functional adaptation in Southeastern archaeological samples, specifically in the central Gulf Coast.

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Little Indiana vs. Big Kentucky: Violence in the Middle-Late Archaic

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Bluegrass (n=50), Firehouse (n=5) and Meyer (n=30) are Middle to Late Archaic mortuary sites located in Southern Indiana that date to around 6,200 to 5,000 ybp. Each has examples of trauma that include cranial depressed fractures, inflicted injuries and trophy taking behaviors (decapitation and dismemberment). This study aims to quantify the prevalence of trauma among Middle to Late Archaic people over the age of 15 in order to compare sites north of the Ohio River to those from the Green River area in Kentucky. The Indiana sites are considerably smaller than those from Kentucky, which have hundreds of individuals per cemetery: Indian Knoll (n=459), Ward (n=240) and Carlston Annis (n=218). Analysts documented traumata in the Indiana groups following standard procedures. Cut marks were verified using 3D profilometry. Green River data came from a combination of direct observation and published sources. Bluegrass, Meyer, and Firehouse had overall trauma prevalence of 10%, 6.7% and 40%, respectively. Of those exhibiting trauma, Bluegrass was the only site that had a higher percentage of females (60%) than male. When cranial depressed fractures are excluded, Bluegrass and Meyer have trauma prevalence at 6% and 6.7% comparable to those of Indian Knoll (6.5%), Ward (11.3%), and Carlston Annis (5%). Firehouse site's small sample size likely exaggerated its prevalence, but the Bluegrass and Meyer data indicate the Archaic people north of the Ohio River were engaged in violent behaviors at levels similar to their Kentucky counterparts.

Variation in parietal bone thickness and structural arrangement in Eastern African *erectus*-like *Homo*: comparative evidence from late Early Pleistocene Uadi Aalad and Mulhuli-Amo, Danakil depression of Eritrea

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Cranial vault thickness behaves as a highly variable feature in extant and fossil humans. While traditionally used to define *H. erectus s.l.* because of its relatively thick-walled bones, recent estimates show that, along the mid-sagittal plane and at the frontal and parietal eminences, bone thickness does not markedly differ between *H. erectus s.l.* and anatomically modern humans, nor does it reliably distinguish African and Asian *erectus*-like representatives. However, compared to the parasagittal areas, paleoanthropological